AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A process for preparing a molecular sieve adsorbent for selective adsorption of oxygen from air, the process comprising

(i) exchanging zeolite X with water-soluble salt of a rare earth metal selected from the group consisting ~~essentially~~ of cerium, europium, gadolinium and any mixture thereof;

(ii) filtering the mixture, washing the powder or pellet with hot distilled water ~~till~~ until it is free from anions to obtain an exchanged zeolite;

(iii) drying the exchanged zeolite;

(iv) and activating the exchanged zeolite,

wherein the process does not involve the use of calcination,

wherein the process does not involve the use of clays and organic binders, and

wherein the adsorbent has adsorbence up to 850mm HG.

2. (Original) A process as claimed in claim 1 wherein the zeolite X is used in powder form has 100% crystallinity or pellet form.

3. (Previously Presented) A process as claimed in claim 1 wherein the Na cations of zeolite are exchanged with salts of the rare earth metals selected from chloride, nitrate and acetate.

4. (Original) A process as claimed in claim 1 wherein the cation exchange is carried at a temperature in the range of 30°C to 90°C for a period in the range of 4 to 8 hours.

5. (Original) A process as claimed in claim 1 wherein the cation exchange is carried out at a cation concentration in the range of 0.01 to 0.1 M solution.

6. (Original) A process as claimed in claim 1 wherein the exchanged zeolite is dried in a temperature range of 20°C to 80°C in air or under vacuum.

7. (Original) A process as claimed in claim 1 wherein the exchanged zeolite is activated at the temperature range of 350 to 450°C for a period in the range of 3-6 hours followed by cooling under inert or vacuum.

8. (Previously Presented) A process as claimed in claim 1 wherein the adsorbent does not contain any lithium, potassium or calcium ions.

9. (Currently Amended) A process for preparing a molecular sieve adsorbent for selective adsorption of oxygen from air, the process consisting essentially of:

(i) exchanging zeolite X with water-soluble salt of a rare earth metal selected from the group consisting ~~essentially~~ of cerium, europium, gadolinium and any mixture thereof;

(ii) filtering the mixture, washing the powder or pellet with hot distilled water ~~till~~ until it is free from anions to obtain an exchanged zeolite;

(iii) drying the exchanged zeolite;

(iv) and activating the exchanged zeolite.

10. (Previously Presented) A process as claimed in claim 9 wherein the zeolite X is used in powder form has 100% crystallinity or pellet form.

11. (Previously Presented) A process as claimed in claim 9 wherein the Na cations of zeolite are exchanged with salts of the rare earth metals selected from chloride, nitrate and acetate.

12. (Previously Presented) A process as claimed in claim 9 wherein the cation exchange is carried at a temperature in the range of 30°C to 90°C for a period in the range of 4 to 8 hours.

13. (Previously Presented) A process as claimed in claim 9 wherein the cation exchange is carried out at a cation concentration in the range of 0.01 to 0.1 M solution.

14. (Previously Presented) A process as claimed in claim 9 wherein the exchanged zeolite is dried in a temperature range of 20°C to 80°C in air or under vacuum.

15. (Previously Presented) A process as claimed in claim 9 wherein the exchanged zeolite is activated at the temperature range of 350 to 450°C for a period in the range of 3-6 hours followed by cooling under inert or vacuum.

16. (Previously Presented) A process as claimed in claim 9 wherein the adsorbent does not contain any lithium, potassium or calcium ions.